

## SCIENTIFIC NOTE:

**CLOEODES EXCOGITATUS (EPHEMEROPTERA:  
BAETIDAE) IN NORTHERN CALIFORNIA<sup>1</sup>**R.D. Waltz<sup>2</sup>, Peter Ode<sup>3</sup>, Jon Lee<sup>4</sup>

The small minnow mayfly genus *Cloeodes* Traver is found in many different freshwater habitats throughout the Neotropics, Afrotropics, Asia and southern temperate areas of North America. Various revisionary works (Waltz and McCafferty 1987) and systematic works (Kluge 1991; Waltz 1993; Waltz and McCafferty 1994; McCafferty and Lugo-Ortiz 1995) have provided taxonomic data for the genus and added greatly to our knowledge of the world distribution of the genus.

The genus was recognized as having tropical affinities by Waltz and McCafferty (1987), McCafferty and Waltz (1990), and McCafferty et al. (1992). McCafferty and Lugo-Ortiz (1995) and Lugo-Ortiz and McCafferty (1993, 1994, 1995) further added to the known distribution of the genus in the Western Hemisphere, viz., southwestern North America, Mesoamerica, and South America.

Herein, we report a remarkable, although possibly not unexpected, distribution record for this primarily subtropical and tropical genus from northern California. Larvae of *C. excogitatus* Waltz and McCafferty were taken in the following site in northern California: CA: Mendocino Co., Williams Crk near Covelo, 29-IX-1996. The above site is characterized by fine silt bottoms mixed with cobble. Stream temperatures are warm in the summer months. The above specimens were taken in low flow conditions near the end of the summer dry season.

Lugo-Ortiz and McCafferty (1994, 1995) extended the known range of *C. excogitatus* from its type locality in Oak Creek Canyon, Arizona, southward to Yavapai County (Arizona) and Mexico. The type locale of *C. excogitatus* was previously the most northern report of the genus in North America. This report extends the known range of this species northward into North America by at least 600 miles reaching the Coastal Biotic Province of California (Usinger 1953) at approximately 40 degrees north latitude. Other northward extensions of primarily tropical genera into North America are also known in other mayfly genera, e.g., the baetid genera *Camelobaetidium* Demoulin and *Paracloeodes* Day (see McCafferty et al. 1992).

Voucher specimens are deposited at the Purdue Entomological Research Collection, Purdue University, West Lafayette, IN and the California Academy of Science, San Francisco.

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